# Bainbridge Island

# Integrated Roadside Vegetation Management Plan

## Draft

April 2004

**Washington State Department of Transportation**
Maintenance and Operations Division

## *Introduction*

The Washington State Department of Transportation (WSDOT) has completed a Programmatic Environmental Impact Statement on its roadside vegetation management program. This study responded to a wide spectrum of public comment with the selection of a preferred alternative titled Locally Based, Long-Term Planning Integrated Vegetation Management. Integrated Vegetation Management (IVM) is a decision making process that applies the principles of Integrated Pest Management as defined in state law (RCW 17.15.010) to the management of roadside vegetation.

The successful implementation of IVM, within the WSDOT maintenance program, is dependent on the development of a statewide roadside management planning system, incorporating site-specific roadside vegetation management plans for all highways in the state. Success within the maintenance program is also dependent on allocation of sufficient funding to accomplish vegetation maintenance activities as described in this plan for SR305 on Bainbridge Island. In the long-term, successful implementation statewide is dependent on the allocation of funding through project development and construction for roadside restoration work.

This document serves to facilitate the implementation of the preferred alternative from the EIS, compliance with RCW 17.15.010 and the intent of The Puget Sound Highway Runoff Program (WAC 173-270), and state policy for roadside management as defined in the Roadside Classification Plan (WSDOT 1996), for the state highway on Bainbridge Island. It defines the vegetation maintenance processes and agreed upon long-term goals and objectives for roadside vegetation specific to state highways on the island. This plan and the statewide IVM planning system are intended for use primarily within the WSDOT maintenance program. The goal in developing and implementing this plan is to achieve the best and most consistent roadside maintenance practices throughout the corridor on the island and to maximize the efficiency and effectiveness of maintenance program delivery over time. Success in meeting this goal will be measured by the improvement of the overall health of the roadside, a resulting minimization of roadside vegetation maintenance costs and a corresponding minimization of herbicide use over time.

The contents of this document are supplemented by an Intranet based Geographic Information System (GIS) application capable of displaying the tabled location data in graphic map form. Due to software licensing restrictions, this system is accessible only to WSDOT employees, but is capable of generated printed copy of areas and information as needed for communication with maintenance crewmembers and the public. WSDOT employees can access the maps for this area through: http://oscims01.wsdot.wa.gov/website/ivm/Bainbridge.

**WSDOT Roadside Policy**
WSDOT's management of roadside vegetation is carried out through two separate but coordinated programs, roadside design and development, and roadside maintenance. Policy and practice in roadside design and development is intended to compliment and support policy and practice in roadside maintenance over the long-term.

A complete description of WSDOT's roadside maintenance policy, typical roadside management zones, and listing of all functional objectives can be found in Chapter 6 of the **2002 Maintenance Manual** (WSDOT M51-01, March 2002). Policy specific to the various roadside management zone objectives for Bainbridge Island can be found in the section of this document titled **Maintenance Activities** and referenced appendices. More information on the application of IVM for Roadsides can be found in **Integrated Vegetation Management for Roadsides** (WSDOT, July 1997). These documents also contain guidance for policy and procedures relating to vegetation maintenance aspect in storm water management as described in the **Highway Runoff Manual** (WSDOT M31-16, February 1995). Definition of maintenance practices within designated Environmentally Sensitive Areas can be found in the **Regional Road Maintenance Endangered Species Act Program Guidelines**, (Regional Road Maintenance Technical Working Group, Current Version)

For project development and construction, WSDOT roadside policy is defined in the **Roadside Manual** (WSDOT M25-30, July 2002), and the **Roadside Classification Plan** (WSDOT 1996).

**Consultation with Other Agencies and the Public**
WSDOT is consulting with the Washington State Department of Ecology on its overall roadside vegetation management program as it relates to storm water runoff and other environmental issues. WSDOT has also presented its program to, and participates in the Interagency Integrated Pest Management Coordinating Committee, established under RCW 17.15 and chaired by the Washington State Department of Agriculture.

In the process of developing and implementing the plan for Bainbridge Island, WSDOT will meet as necessary with the general public, local government, and any local special interest groups to collect input on the plan, and make adjustments where possible to address local concerns.

**Additional References**
Additional information and copies of the documents referenced in this plan are available through the Internet at addresses listed below, or by contacting the WSDOT Headquarters Highway Maintenance Office at: PO Box 47358, Olympia, WA 98504-7358, or (360) 705-7850.

Roadside Maintenance Program information:
http://www.wsdot.wa.gov/biz/maintenance/htm/roadside_maint.htm
Roadside and Site Development Program information:
http://www.wsdot.wa.gov/eesc/design/roadside/

Roadside Vegetation Management Programmatic Environmental Impact Statement:
http://www.wsdot.wa.gov/biz/maintenance/pdf/Roadside_Vegetation_Management_12-93.pdf
WSDOT Maintenance Manual:
http://www.wsdot.wa.gov/fasc/EngineeringPublications/Manuals/Final%20MM.pdf
Integrated Vegetation Management for Roadsides:
http://www.wsdot.wa.gov/biz/maintenance/pdf/IVM.pdf
Highway Runoff Manual:
http://www.wsdot.wa.gov/fasc/EngineeringPublications/Manuals/Highway.pdf
Regional Road Maintenance Endangered Species Act Program Guidelines:
http://www.metrokc.gov/roadcon.bmp/pdfguid.htm
WSDOT Design Manual:
http://www.wsdot.wa.gov/fasc/EngineeringPublications/Manuals/DesignManual.pdf
WSDOT Roadside Manual:
http://www.wsdot.wa.gov/fasc/engineeringpublications/Manuals/RoadsideManual.pdf
WSDOT Roadside Classification Plan:
http://www.wsdot.wa.gov/eesc/design/roadside/pdf/RCP_1.pdf

## *Roadside Character*

The highway roadside on Bainbridge Island is predominately semi-urban or forested in character with the landscape consisting of natural or naturalized forest or a semi-urban mix of built and natural or naturalized elements. Roadside vegetation maintenance practices are intended to highlight and enhance the natural character of the visual environment on this island.

**Visual Standards**
Vegetation management practices along SR305 will maintain and preserve the overall natural appearance of existing character type through the management of predominately native trees and understory vegetation. Maintenance activities in all areas other than the vegetation free zone at the pavement edge (Zone 1) will encourage grasses and stable native plant communities through the selective removal of competitive noxious, nuisance weeds, and of undesirable or potentially hazardous trees.

Implementation of this management plan will have some impact on the visual quality of this corridor over time. The plan is intended to direct activities and practices to minimize visual evidence of maintenance activities including herbicide applications and side trimming of trees and brush. It is also intended to reduce populations of noxious and nuisance weeds over time in areas where they have become established. This will result is an improvement of the visual quality of these areas by reestablishing native plant communities that appear to be naturally self-sustaining to the greatest degree possible.

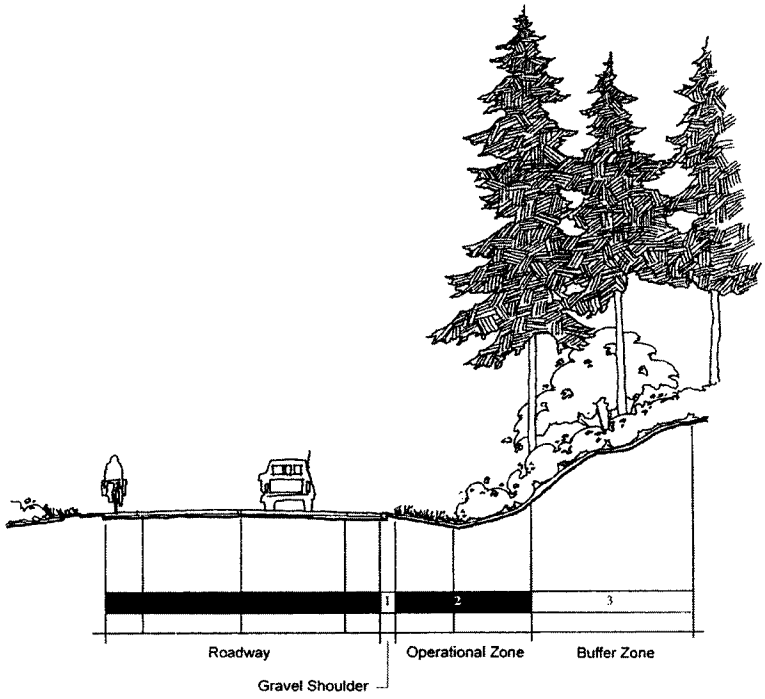
**Operational Zones**

WSDOT roadsides are divided into several zones for the purposes of assigning management objectives, maintenance intensities, and thresholds for triggering vegetation maintenance actions. Noxious weed species designated for control by state and county law are controlled throughout all zones. As per the 2002 WSDOT Maintenance Manual (M51-01, March 2002), roadside vegetation management zones are as follows:

**Zone 1** – A vegetation free gravel shoulder, when present, is maintained as an approximately 3-foot wide strip to provide for key operational, safety and pavement preservation needs.

**Zone 2** – The operational zone extends from the edge of Zone 1, or the pavement edge, to a width necessary to provide for safe errant vehicular recovery, maintain sight distance at corners and intersections, and provide for other operational, safety, and environmental functions.

**Zone 3** – In areas with sufficient right-of-way width, a buffer or transition zone extends from Zone 2 to the right-of-way line to provide a buffer or transitional area between the highway facility and adjacent land uses. This area is maintained selectively, and to the greatest degree possible as a self-sustaining plant community, to minimize erosion as well as the growth of weeds and undesirable trees and brush.




**Typical Roadside Vegetation Management Zones**
Figure 1

Not all maintenance zones will occur along state highway on Bainbridge Island. In many cases the narrow width of the right-of-way or adjoining land-use, limits the operational zones to Zone 1 and/or a narrow Zone 2 only.

**Environmentally and Herbicide Sensitive Areas**
In response to the Endangered Species Act and the listing of threatened and endangered aquatic species in Washington State, current WSDOT policy provides for a 300-foot buffer around designated sensitive areas where certain maintenance activities are modified to reduce impacts on natural aquatic systems. On Bainbridge Island, WSDOT roadsides cross over, through, or are adjacent to 6 areas considered priority sensitive habitats. With regard to vegetation management and the use of herbicides, the methods and procedures as defined by WSDOT policy and the contents of this plan will serve to help minimize the impact of the highway and maintenance operations on the environment.

Within these 300-foot buffer zones, WSDOT has further delineated 60' buffers from water bodies as **herbicide sensitive areas,** where herbicide use will be limited to only selective, hand applications of herbicides for control of noxious weeds and other undesirable species when necessary as part of the IVM treatment plan. Zone 1 will not be maintained in these areas and grasses will be established up to the edge of pavement.

**Special Maintenance Areas**
This plan also defines and identifies areas with unique roadside maintenance requirements or where arrangements exist due to the surrounding land use, neighbor concerns or specific highway related functions.

**Public Notification of Herbicide Applications**
WSDOT is required by law to notify chemically sensitive individuals on file with Washington State Department of Agriculture, where the residing property abuts the highway right of way and the residence is within ½ mile of the property line. There are currently no registered chemically sensitive individuals listed as meeting these criteria on Bainbridge Island.

WSDOT will also include a weekly report of any planned herbicide applications for the island on the WSDOT Internet website at: http://www.wsdot.wa.gov/regions/olympic/construction/ , under Kitsap County Maintenance Activities. The public can obtain additional information on herbicide applications by contacting the area maintenance office in Port Orchard at (360) 874-3050.

**Herbicide Safety**
When applying herbicides WSDOT takes precaution to avoid any impact on human and environmental health, and to ensure herbicides do not move off target. Applications are made only by trained and licensed employees following all state and federal regulations as well as all recommendations and restrictions given on the individual product labels as approved by the US Environmental Protection Agency.

WSDOT has also conducted a risk assessment for the herbicide products and application methods used on state highways. Toxicological impacts of WSDOT practices were evaluated for human health (both operators and the general public), for aquatic ecosystems, and terrestrial wildlife. The findings of this assessment are summarized in a series of fact sheets for the individual herbicides used by WSDOT. These fact sheets can be viewed and downloaded through the Internet at: http://www.wsdot.wa.gov/biz/maintenance/htm/risk_assessment.htm, or copies may be obtained by calling the WSDOT Headquarters Maintenance Office at (360) 705-7850.

**WSDOT Employee Training and Education**
Perhaps the most important key to success in the implementation of this plan is the education and training of the maintenance employees responsible for delivery of the program on a day-to-day basis. This plan and the information resources it provides is intended to supplement and enhance existing training and education opportunities already in place. Training and education

for employees engaged in delivery of the roadside vegetation management on Bainbridge Island will include:

- Participation in an annual one-day spring review of vegetation management needs and activities from the previous year, and planning for the coming year, including the Bainbridge Island maintenance crew, supervisor, and area maintenance superintendent and assistant superintendent.
- Development of a field guide using representative photographs taken along highway and city maintained roads on the island to illustrate key aspects of IVM treatment. This will be developed over the first several years of plan implementation.
- Attendance at the annual statewide WSDOT Roadside Vegetation Management Workshops, where there is a focus on IVM tools and procedures, proper and safe use of herbicides, and lessons learned from around the state.

## *Roadside Design and Construction Considerations*

Highway construction in many cases has a significant impact on drainage, soils and vegetation adjacent to the paved roadway. WSDOT policy and practice for restoring the operational, environmental and visual functions disturbed by construction is based on the guidelines found in the Roadside Classification Plan (RCP) (WSDOT 1996), and the Roadside Manual (WSDOT M25-30, July 2002).

There are currently no plans scheduled for future construction of SR305 on Bainbridge Island, although the pavement is scheduled for resurfacing in 2006.

## *Vegetation Management Overview*

Control and management of roadside vegetation is an on-going cycle, and a resource intensive process. This plan is intended to help guide vegetation management activities through a series of steps that includes:

1. Identification and location of environmentally sensitive areas and areas with special vegetation maintenance consideration
2. Definition, locations, methods, and timing for carrying out routine annual vegetation maintenance activities
3. Definition, identification, and locations of all vegetation problems requiring treatment using the Integrated Vegetation Management (IVM) decision-making process and recommended, species-specific, best management practices (BMP) along with the ongoing monitoring and evaluation of treatments in these locations

The detailed description of vegetation management activities for the island is included in this document in the following sections under **Maintenance Activities.** Prescriptions for routine maintenance activities and IVM treatment options are included in Appendix A.

**Annual Vegetation Maintenance Cycle**
Vegetation management activities typically begin each year in the spring and continue through the fall, with some activities such as danger tree removal and some tree and brush control activities occurring throughout the year. An overview of a typical roadside maintenance season is as follows:

**Early Spring**
At the start of the active growing season, maintenance technicians routinely apply a band of soil-residual and non-selective herbicide, averaging 3' in width to the road shoulder in order to maintain this area as free of vegetation in support operational needs. On Bainbridge Island this treatment will only be applied around the base of guardrails.

**Spring and Summer**
Throughout the growing season roadside maintenance activities are focused on mowing the shoulders, controlling weeds and some control of undesirable emerging trees and brush. Monitoring also occurs through this time to identify any new areas or situations requiring treatment, and to evaluate treatments made earlier in the year or in the previous season. Weed control activities are made dependent on timing in relation to the growth and lifecycle of the weeds or undesirable vegetation being treated. Wherever possible, trees and brush are controlled when small for maximum cost efficiency and to avoid negative visual impact. These activities are conducted in accordance with the IVM treatment plans for each location, and following the management prescriptions described in Appendix A. All IVM activities are documented, monitored and evaluated using the forms in the IVM Planning and Treatment Database.

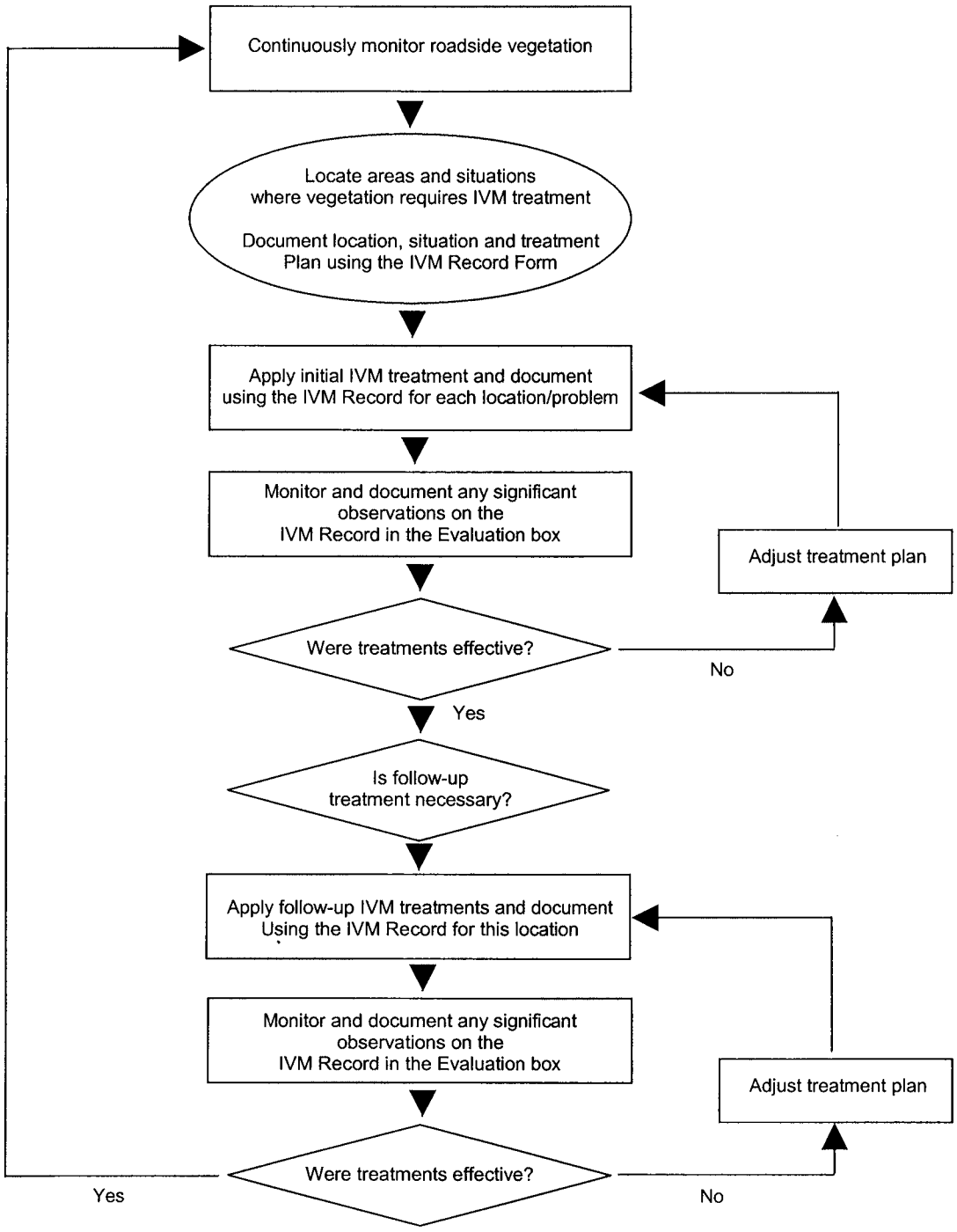
Routine mowing activities during this period are focused on making one mowing pass, where needed, extending to the bottom of the ditch or approximately 8 feet from edge of pavement on all shoulders where guardrail or barrier does not exist. Some selective mowing or trimming of areas behind guardrail or barrier, and beyond the 8-foot width where site distance is required also occurs on an as needed basis.

**Fall and Winter**
Activities in the fall and winter are focused on control of undesirable invading brush species and the removal of trees that pose an immanent or future hazard to the highway. These activities are conducted as time allows given other highway maintenance needs and weather dependent winter maintenance operations. These activities will be conducted in accordance with the documented long-term IVM treatment plans following the management prescriptions described in Appendix A and under Plan Contents, in Sections 1 and 2.

**Action Thresholds**
An action threshold is the point at which an individual plant or infestation begins to impact highway operations, WSDOT's legal obligations, or other maintenance program objectives. At this point the vegetation is considered a target for control, is subject to the development of treatment plans, and is prioritized for maintenance action.

The action threshold for some activities is exceeded on a routine or annual basis, such as the maintenance of a vegetation-free strip adjacent to the edge of pavement (Zone 1), or where regular mowing and/or trimming is required to preserve sight distance at curves, road approaches, or intersections. In other cases action thresholds are set at varying levels for individual plant species such as noxious or nuisance weeds, or for potentially large and dangerous trees growing too close to the highway. Action thresholds are described for individual plant species and/or types of vegetation as part the Integrated Vegetation Management Prescriptions table shown in **Appendix A**.

**The Integrated Vegetation Management Decision-Making Process**
Within maintenance, the IVM decision-making process is applied in any situation where there is an opportunity to eliminate or reduce a reoccurring vegetation problem with the establishment of or enhancement of surrounding, existing, stable, low-maintenance vegetation. Additional information and guidance on the application of IVM can be found in the publication **Integrated Vegetation Management for Roadsides** (WSDOT, July 1997). **Figure 2** below diagrams the IVM decision-making process used by maintenance in the field.




**The IVM Decision-Making Process**
Figure 2

Maintenance
Activities

## 1. ROUTINE MAINTENANCE ACTIVITIES

Roadside maintenance activities are considered routine when regular annual treatment is required because vegetative growth annually or regularly exceeds action thresholds. Typical routine maintenance activities are maintenance of Zone 1 and certain types of mowing and trimming.

### 1.1. Routine Shoulder Maintenance (Zone 1)

#### 1.1.1. Policy and objectives

Zone 1, when present, is maintained free of vegetation to promote positive surface and subsurface drainage, protect asphalt shoulders from deterioration due to vegetation growth, enhance preservation of roadside hardware (guardrails) and to function as a firebreak. Zone 1 will not be maintained along SR305 throughout Bainbridge Island except around the base of guardrail in locations as defined in this plan. Because this policy varies from typical WSDOT practice, the highway on Bainbridge Island will be used as an evaluation section for measurement and monitoring of maintenance costs and results from not maintaining Zone 1 on a state highway.

The width of Zone 1 around guardrails is set at an average of 3'-0" (or to the back side of roadside hardware) as measured from the edge of pavement toward the slope of the shoulder.

In the herbicide sensitive areas as marked on Bainbridge, no herbicides will be applied for maintenance of Zone 1 around guardrails. In these buffer zones, grasses will be allowed to naturally establish up to the edge of pavement where guardrail is not present. Any nuisance or noxious weed species that emerge in these areas will be controlled by hand pulling or with selective hand-made spot applications of herbicide. Vegetation will be controlled around the base of hardware with hand mowing. Herbicide sensitive areas and associated no-spray buffers are identified in **Appendix B, Zone 1 Maintenance, Table 1.1.2**. Areas are also marked in the field.

***Exception Areas (No Zone 1)***

Areas where Zone 1 will not be maintained on Bainbridge Island:

- All shoulders without guardrail
- Shoulders with guardrail in close proximity (60') of sensitive aquatic habitat

***Variance Areas (Wider than Standard Width)***

There are no areas where Zone 1 will be greater than 3 feet on Bainbridge Island.

#### 1.1.2 Methods (timing and procedures)

Zone 1 will be maintained by an annual application of non-selective foliar active herbicide (glyphosate) applied according to label instructions and in compliance with all state and federal regulations. Zone 1 applications will not be made during periods of heavy rain or in wind greater than 10 miles per hour.

Applications will be made in the spring typically in May. They will be planned and carried out depending on weather patterns and precipitation events.

In all areas where Zone 1 is not maintained the shoulder will be mowed if necessary as described under Section 1.2 below. It is anticipated that buildup of soil and vegetation at the edge of pavement may impede surface drainage of storm water. These areas will be monitored and buildup will be

removed every several years or more, as needed to allow for surface drainage.

Zone 1 chemical applications will be documented on the WSDOT Pesticide Application Record.

***Prescriptions***
See **Appendix A, Routine Maintenance Prescriptions, Zone 1 Maintenance**

#### 1.1.3 Locations by Milepost
Exception areas and variance areas for Zone 1 maintenance are listed in **Appendix B, Zone 1 Maintenance, Table 1.1.2**

### 1.2. Routine Mowing/Trimming (Zone 2)

#### 1.2.1. Policy and objectives
Zone 2 is also referred to as the operational zone and is maintained to fulfill operational, safety, and environmental functions of the highway roadside. Vegetation management considerations include: mowing of vegetation immediately adjacent to pavement, noxious and nuisance weed control, brush control, the removal of trees with a potential trunk diameter of greater than 4", and the trimming or removal of limbs and brush where there is risk of falling on the highway or otherwise encroaching on highway operations. Maintenance techniques used to accomplish these objectives must consider impacts on sensitive areas, erosion control, water quality, long-term vegetative growth and overall visual quality.

Where Zone 1 is not present, Zone 2 begins at the edge of pavement.

Overall vegetation management in Zone 2 will encourage stable native plant communities through routine mowing and trimming, and the selective removal of competitive noxious and nuisance weeds, and undesirable trees as described in Section 2 below. Vegetation management techniques will be conducted to maintain the predominately natural but low growing appearance of the roadside.

Zone 2 is measured from the edge of Zone 1 (or the pavement edge if Zone 1 is not present) to the designated errant vehicle recovery zone width for a given segment of highway, or to the width required to provide site distance at curves and intersections, or visibility of highway signs. Maintained recovery zone widths are based on a variety of factors including design speed, slopes, and the presence of guardrail. The typical recovery zone width for highways on Bainbridge Island is approximately 30 feet from the outside pavement stripe, or the width of the right of way if less than 30 feet. The recovery zone must be free of vegetation with trunk diameter greater than 4". Where guardrail exists there is no need to maintain the vehicle recovery zone.

In areas where guardrail or other barrier is present on straight highway sections where site distance is not an issue, Zone 2 may not be maintained.

#### 1.2.2. Methods (timing and procedures)
***Mowing***

Routine mowing as necessary will be the primary treatment method for the portion of zone 2 directly adjacent to the highway. Practices will consist of a single pass to the bottom of the ditch line where present or a 6 to 8 foot mowing pass with a side-mounted mower. This will be done on an annual basis wherever needed, throughout the corridors in all areas where guardrail is not present. A second mowing will be done later in the season if needed. Mowing equipment will be set a minimum of 4 inches above ground to eliminate the potential for exposing bare soil caused by close mowing. Ideally mowing height should average 6 to 8 inches. Bare soil may contribute to erosion and provide an opportunity for weed infestations to begin along the right-of-way. Areas with guardrail or steep sloping terrain will be selectively trimmed when necessary with a side mower attached to an articulated boom as described under Selective Trimming below.

Single pass mowing of Zone 2 will be timed and conducted to minimize damage to desirable herbaceous and woody plant species to the greatest extent possible. In areas dominated by grass, mowing may occur whenever practical to meet operational needs. In areas where desirable herbaceous and woody species are established within 6 to 8 feet of the pavement mowing (if required) should follow spring and early summer flowering and root development. Whenever possible/ practical desirable native, low-growing vegetation should be skipped or mowed around. When mowing of desirable shrubs is required due to site distance or encroachment on traffic, mowing height should be a minimum of 18".

***Selective Trimming***

Brush, tree limbs, and other woody vegetation growing into Zone 2 from Zone 3 or off right of way will be routinely trimmed as necessary. In some cases it is more effective to selectively remove individual plants when young to prevent them from becoming problems in the future, in these cases IVM treatments will be applied as described in Section 2 below. However routine selective trimming is defined as mechanical side trimming or "hedging" to create a dense cover of desirable plants and reduce the potential for invading, undesirable vegetation.

Whenever possible, side arm brush trimming will be conducted as early in the season as possible so that spring re-growth will minimize negative visual impacts.

***Prescriptions***

See **Appendix A, Routine Maintenance Prescriptions, Zone 2 Maintenance**

#### 1.2.3. Locations by Milepost

**Appendix B, Zone 2 Maintenance, Table 1.2.3** shows locations for roadside hardware such as guardrail, which may affect maintenance of Zone 2.

### 1.3. Hazard Tree Removal

#### 1.3.1. Policy and Objectives

It is WSDOT policy to remove trees that pose a threat to the traveling public and to the transportation infrastructure as soon as possible upon identification. Danger trees can pose imminent danger to roadway user or be considered a long-term threat during storm events.

Danger trees may be dead, leaning, or structurally unsound. Best horticultural judgement will be used in evaluating trees that appear diseased or structurally unsound or are believed to pose a long-term threat to determine the best course of action.

Danger trees should be removed in such a manner to minimize damage and impact to the highway structure and other healthy trees and understory vegetation.

Another consideration in removal of trees is the contribution to shading in areas prone to frost and ice formation on the highway surface. When such areas are identified, the surrounding canopy may be thinned through selective removal of large trees on the right of way.

## 2. INTEGRATED VEGETATION MANAGEMENT ACTIVITIES

For all vegetation management needs not addressed through routine maintenance as described above, activities are planned and carried out using the principles of Integrated Vegetation Management (IVM) and the decision making process described in **Figure 2**. This is consistent with requirements in state law pertaining to the use of Integrated Pest Management (IPM), as defined in Chapter 17.15 RCW. IVM is a coordinated decision making process that uses the most appropriate vegetation management methods and strategy, along with a monitoring and evaluation system, to achieve long term roadside maintenance goals and objectives in an environmentally and economically sound manner. The result of utilizing the IVM approach is the establishment of stable, low maintenance native or naturalized plant communities on the roadside that are compatible with highway maintenance and safety objectives, preservation of environmental quality, weed control requirements, and the concern's of WSDOT's customers and neighbors. Long term, the use of the IVM approach can reduce the intensity and cost of maintenance as well as minimizing the need to use herbicides.

### 2.1. Integrated Vegetation Management Planning and Tracking Database

#### 2.1.1. Description

One of the keys to successful use of IVM is carrying out activities in accordance with a long-range plan and to follow up with monitoring and evaluation of treatment results. To facilitate this, forms and a database have been created for statewide use by WSDOT maintenance. This system is being tested as part of the initial development of Roadside Vegetation Management Plans and will be modified and refined as technology in this area continues to develop over the coming years.

#### 2.1.2. Sample forms

A copy of the Integrated Vegetation Management Record is included in **Appendix E, Forms and Records**.

#### 2.1.3. Instructions for use

Maintenance supervisors and technicians can access the IVM Record through the existing Pesticide Application Record Keeping system available from the area office.

### 2.2. Noxious Weed Control

#### 2.2.1. Policy and objectives

As defined by RCW 17.10, all property owners including state agencies, are required to control noxious weeds on lands that they own and manage. Noxious weed control is a high priority for WSDOT as a result of this legal mandate as well as the fact that if they are left unchecked, levels of infestation can begin to spread at exponential rates from year to year. Noxious weeds are invasive, non-native plant species that can quickly dominate native plant communities and spread to other areas or regions. New infestations of noxious weeds often appear first in highway corridors after being transported from other areas by vehicles or transportation of agricultural products. Without timely control, these new infestations can further spread along transportation corridors and to adjacent property. The overall cost and impact to the economic viability of the agricultural community and the health of native ecosystems can be significant. Also some of these plants are toxic to livestock and/or humans.

WSDOT prioritizes weed control based on three legally defined weed species classification categories. Chapter 16-750 of the Washington Administrative Code lists weed species in classes A through C. Noxious weeds include all plants listed as class A, and those in classes B and C that are designated for control within each individual county.

***Class A***

Class A noxious weeds are non-native species with a limited distribution in the state. Immediate treatment of these new infestations is required by State law and is the top weed control priority to prevent spread into adjacent areas.

No Class A weeds are known to occur within WSDOT right-of-way on Bainbridge Island.

***Class B***

Class B weeds are more widespread than Class A, with control mandated by law only if infestations are generally limited and the species are designated within the individual counties by the County Noxious Weed Control Boards. Containment, gradual reduction, and prevention of further spread are the chief management concerns of Class B species. For the purposes roadside management on Bainbridge Island, WSDOT will provide consistent annual IVM treatments for all known species of Class B noxious weeds designated for control by the Island County Noxious Weed Control Board. Treatment will continue until these species have been eradicated from WSDOT rights of way wherever possible. Priority for treatment of these infestations will be areas where control is being also being accomplished on neighboring properties.

Class B noxious weeds designated for control within Island County, and currently present within WSDOT right-of-way on Bainbridge Island include: **Meadow knapweed** (*Centaurea jacea x nigra*), **diffuse knapweed** (*Centaurea diffusa*).

***Class C***

Class C noxious weeds are widely established throughout Washington or may impact the agricultural industry. Counties may require control of certain Class C weeds at their own discretion. Unless otherwise required, WSDOT classifies most Class C species as "nuisance" weeds and provides control as part of the general roadside vegetation management program. Nuisance weeds and treatment options are described in Section 2.4 of this document.

Class C noxious weeds designated for control within Island County, and are currently present within WSDOT right-of-way on Bainbridge Island include: **Poison hemlock** (*Conium maculatum*).

### 2.2.2. Methods

Because noxious weed species are often difficult to control, herbicides treatments are often the primary, initial means of control. If infestations are limited to a few plants, hand pulling is also effective when the entire root system is also removed. Once actively growing plants have been treated or removed, the remaining seed bank in each location must be depleted over succeeding years by treating any re-growth. Timing of herbicide treatments within the growth stage of the weed species is often critical to achieving complete control of perennial species. With annual species, the most important measure is prevention of seed production.

In conjunction with weed control treatments, a variety of other measures may be taken to promote natural vegetative competition through seeding, planting, and soil enhancement. The IVM Record and database are essential to the execution and success of these control measures.

#### 2.2.3. Prescriptions

See **Appendix A, IVM Prescriptions, Noxious Weed Control**

#### 2.2.4. Species Location by Milepost

See **Appendix B, Noxious Weed Locations, Table 2.3.4**.

## 2.3. Nuisance Weed Control

#### 2.3.1. Policy and objectives

Nuisance weed control, while not required by state law, provides many positive benefits to the overall condition of the roadside, enhances ecological function by maintaining and enhancing native plant communities, reduces the potential for continuing spread of weed infestations, and enhances visual quality.

Dependent on crew availability and budget, nuisance weeds will be controlled throughout the roadsides of Bainbridge Island as part of the overall Integrated Vegetation Management process. Priority control measures will be given to new infestations where there is a greater chance of control prior to continued invasion into healthy stands of existing vegetation. In some cases where practical, nuisance weed infestations may be treated in conjunction with treatment of noxious weeds.

For established infestations currently identified in this plan, weed populations will be contained and gradually reduced by applying appropriate vegetation management prescriptions. Control options range from manual cutting, mechanical removal, and biological control, to targeted selective herbicide application, or combinations thereof.

#### 2.3.2. List of species currently present

Nuisance weeds are widely established along SR305 on Bainbridge Island. In some cases, these weeds have become the dominant vegetation along the roadsides.

Class C weeds that are currently present within WSDOT right-of-way on Bainbridge Island, but not required for control, include: **Scotch broom** (*Cytisus scoparius*), **tansy ragwort** (*Senecio jacobaea*), **poison hemlock** (*Conium maculatum*), **Canada thistle** (*Cirsium arvense*), **musk thistle** (*Carduus nutans*) **bull thistle** (*Cirsium vulgare*), and **common tansy** (*Tanacetum vulgare*) are the most commonly encountered nuisance weeds.

**Himalayan blackberry** (*Rubus discolor*) is a non-native plant not listed as a noxious weed in Washington State, but is controlled as a nuisance weed by WSDOT because of it's invasive properties.

There is also a new weed species present on the island that has shown up in recent years and is not yet listed as a noxious weed, but will likely be listed in the near future. This plant is **common butterfly bush** (*buddleia davidii*), which is highly invasive and is identified as a nuisance weed for the purposes of this plan.

### 2.3.3. Methods

Control measures for nuisance weed are dependent on the type of plant. Woody species such as Scotch broom and Himalayan blackberry are most effectively treated with a combination of cutting, herbicide treatments and encouragement of native vegetation. Perennial species such as Canada thistle are most effective controlled by succeeding years of properly timed selective herbicide applications. Annual or biennial species such as bull thistle and common tansy may also be effectively controlled by hand pulling prior to seed set.

### 2.3.4. Prescriptions

See **Appendix A, IVM Prescriptions, Nuisance Weed Control**

### 2.3.5. Species Location by Milepost

See **Appendix B, Nuisance Weed Locations, Table 2.4.5**.

## 2.4. Tree and Brush Control

### 2.4.1. Policy and Objectives

The primary objective for this type of work is to prevent the growth of large and potentially overhanging, hazardous trees. Native large shrub and small tree species should be allowed to grow and mature in Zone 2 and side trimmed if they begin to encroach on site distance or other traffic operational requirements, as described in Section 1.1.2 above. However, large tree coniferous or hardwood deciduous species such as Douglas fir, bigleaf maple, alder, or cottonwood left to grow in Zone 2 and in some cases parts of Zone 3, can reach substantial size over a relatively short period of time. The longer they are left to grow in these locations, the greater the visual impact and cost when they eventually must be removed.

### 2.4.2. Methods

Removal of undesirable tree and brush species is typically accomplished by hand cutting, hand pulling, properly timed selective mowing, properly timed herbicide applications, or combinations thereof. In some locations it is most effective to mow back the majority of the existing vegetation and then selectively treat undesirable re-growth with herbicides in succeeding years, allowing desirable vegetation to grow up around and form a competitive cover. In some cases when tree and brush species are cut by hand, the debris can be fed through a chipper and placed back on the roadside in the form of mulch. In other cases, when trees and brush are of small enough size and maintenance has access to heavy duty mowing equipment, undesirable trees and brush can be ground off in one step and the mulched debris left on site as mulch.

Timing of these activities has a significant effect on how the vegetation grows back. Herbicide applications made by hand, directly to the cut surfaces of undesirable plants may be used to reduce or eliminate grow back.

Manual trimming or hand cutting methods will be used on all trees or other brush greater than 6 feet in height or with a trunk diameter of 2 inches or greater to provide clean cuts. In these cases, trunks will be cut no higher than 4 inches above the ground surface. Chemical control methods will not be used on conifers greater than 2 feet in height. Chemical control methods

will not be used on deciduous plants until after the first of September, except for as cut stump treatments to eliminate grow-back.

Whenever possible, safe and practical seedling trees will be dug or pulled by hand and transplanted to areas where there growth will be beneficial and appropriate. Agreements may be signed to allow private citizens to collect seedlings for use as transplants.

### 2.4.3. Prescriptions

See **Appendix A, IVM Prescriptions, Tree and Brush Control**

## 3. SPECIAL MAINTENANCE AREAS

Special Maintenance Areas may include interchanges, community entrances or enhancement areas, areas maintained by cities, bicycle paths, storm water retention ponds, state park land, wellheads, environmentally sensitive areas, school zones and roadsides adjacent to individual properties with current or annual no-spray agreements.

### 3.1. Interchanges/Intersections

#### 3.1.1. Policy and objectives

Interchange and major intersections areas are managed consistent with roadside operational, safety, and environmental functions including sight distance, water quality, noxious and nuisance weed control, and overall visual quality. Interchange areas are often developed to a greater level than general roadside areas to include storm water management facilities, pedestrian areas, and permanent vegetation designed for screening, permanent erosion control, visual enhancement, etc.

There are currently no interchanges or intersections maintained as special maintenance areas on Bainbridge Island.

### 3.2. Formally Landscaped Sections

#### 3.2.1. Policy and objectives

Formally landscaped sections of the roadside and within interchange areas will be maintained consistent with WSDOT operational, safety, and environmental functions and within the context of the surrounding community or landscape. Remote forested roadside areas that were restored under contract or as part of the IVM process will be maintained consistent with the Zone 2 or Zone 3 goals for that section. Interchange or roadside areas occurring in more urbanized areas will receive more intensive regular maintenance as necessary.

Community Enhancement Areas, as described in the Roadside Classification Plan, are areas designed and maintained in partnership with local communities and civic organizations. These areas can provide opportunities to develop interchange areas to a greater extent that would be possible through normal WSDOT construction or maintenance programs. These areas are typically maintained by agreement with the primary maintenance responsibility given to the local partner.

On Bainbridge Island, there are currently no formally landscaped areas.

### 3.3. Herbicide Sensitive Areas

#### 3.3.1. Policy and objectives

WSDOT has identified three areas where herbicide use will be limited to reduce any potential risk to the environment. In areas designated as herbicide sensitive areas, no herbicide will be applied to the shoulders and grasses will be allowed to establish to the edge of pavement. Herbicide applications made for noxious or nuisance weed control, maintenance of vegetation at the pavement edge, or applications made in combination with mechanical methods for control of undesirable trees will be made selectively by hand.

There are a number of individuals living on Bainbridge Island who have been diagnosed with Multiple Chemical Sensitivity (MCS). WSDOT is required by law to notify these individuals when making herbicide applications to roadside locations if the highway right of way is adjacent to their property and their principle residence is within one-half mile of the application. There are currently no individuals meeting these criteria on the island.

To inform individuals with MCS and/or concerns over herbicide impact on human health on Bainbridge Island, WSDOT has agreed to provide herbicide application updates on a weekly basis between April and October to inform concerned individuals if, where, when and what type of herbicide applications are planned for each week on line at: http://www.wsdot.wa.gov/regions/olympic/construction/. Individuals can obtain further information by contacting the area maintenance office in Port Orchard at (360) 874-3050.

#### 3.3.2. Methods and Prescriptions

Activity descriptions and IVM prescriptions are included in sections above and in relevant appendices, as they relate to the various types of maintenance.

#### 3.3.3. Locations by Milepost

Special maintenance areas are listed all together in **Appendix D, Special Maintenance Areas, Table 3.0**. Herbicide sensitive areas are also listed in relation to the maintenance of Zone 1 in **Appendix B, Zone 1 Maintenance, Table 1.1.2.**

### 3.4. Adopt-a-Highway and Owner Will Maintain Agreements

#### 3.4.1. Policy and objectives

The Adopt-a-Highway program is a program that allows private citizens, volunteer groups, and businesses an opportunity to contribute to an enhanced roadside appearance through direct partnership with WSDOT. The program improves the overall appearance of the roadside primarily through litter control, although other activities that improve the visual and environmental condition of the roadside are permitted as well including limited planting and maintenance of specific areas. Other partnership opportunities are possible through general permits and agreements. Volunteer groups that do enhancement planting on WSDOT roadsides are typically required to establish and maintain the plantings. Communities may partner with WSDOT to develop and maintain selected Community Enhancement Areas as described in the Roadside Classification Plan.

Neighboring property owners may enter into an agreement with WSDOT where they take responsibility for the vegetation management activities along the area where their property abuts state right of way. These "owner will maintain" agreements are established through a General Permit and are required to be renewed on an annual basis. These agreements are typically implemented in cases where a neighboring property owner desires a higher level of care in front of their business or residence, or prefers maintaining the area to avoid WSDOT herbicide applications near their home or business.

#### 3.4.2. Locations by Milepost

There are currently no ongoing agreements of this type on Bainbridge Island.

## 3.5. Environmentally Sensitive Areas

### 3.5.1. Policy and Objectives

As a state agency, WSDOT is committed to conducting it activities in accordance with the dictates of sound environmental protection practices, including pollution prevention, work to avoid, minimize and appropriately mitigate adverse environmental impacts, and to comply with all environmental laws and regulations applicable to our business and activities.

Numerous environmentally sensitive areas such as streams, rivers, wetlands, lakes, and salt-water beaches containing habitat and species protected by the Endangered Species Act, as well as wellhead areas occur within close proximity to the highway system and sometimes require alternative management techniques or specialized emergency response plans, in order to reasonably avoid or minimize environmental or water quality impacts. Since Integrated Vegetation Management (IVM) techniques will be used along all state highways on the island to mitigate impacts from highway operation through the establishment of naturally self-sustaining plant communities in these areas, practices will not vary within these designated areas.

In compliance with the Regional Road Maintenance Endangered Species Act Program Guidelines, as agreed upon with the National Marine Fisheries Service, WSDOT has identified, mapped and located in the field all highway sections within 300 feet of rivers, wetlands and water bodies.

### 3.5.2. Special Considerations/Actions

With the exception of the limitations on herbicide use as described in Section 3.3 above, WSDOT will maintain roadside vegetation in these areas consistent with the descriptions and prescriptions dictated in this plan. IVM techniques will be used to target specific noxious weeds that occur in these areas to maintain control with the least amount of impact to the surrounding environment. All control measures will conform to applicable state and federal laws, label restrictions, and acceptable best management practices.

### 3.5.3. Locations by Type and Milepost

See **Appendix D, Special Maintenance Areas, Table 3.0**

Appendix A

# *Appendix A Routine Vegetation Management Prescriptions*

## Routine Maintenance Activities

**Zone 1 Maintenance - *typical annual maintenance***

| | Management Goal | Method | Equipment | Materials | Timing | IVM Follow-up |
|---|---|---|---|---|---|---|
| gravel shoulder | 3' area free of vegetation around the base of guardrail | annual herbicide application | spray truck w/ fixed nozzle Monroe sprayer w/ Raven controls calibrated to the oz. | non-selective herbicide Roundup Pro @ 32 oz/acre | May | none required |

**Zone 2 Maintenance - *annual mowing w/ no zone 1***

| Location Type | Management Goal | Method | Equipment | Materials | Timing | IVM Follow-up |
|---|---|---|---|---|---|---|
| operational zone adjacent to shoulder - no zone 1 | 4 inch min. ht. single pass mowing adjacent to pavement where zone 1 is not present to to maintain desirable low veg | annual mowing, 6' - 8' single pass adjacent to shoulder | mower, attenuator | none required | May, July and as needed | seed and fertilize as needed to improve competition against weeds |

**Zone 2 Maintenance - *annual mowing around base of guardrail***

| Location Type | Management Goal | Method | Equipment | Materials | Timing | IVM Follow-up |
|---|---|---|---|---|---|---|
| operational zone adjacent to shoulder under guardrail in herbicide sensitive area | 4 inch min. ht. mowing to maintain desirable low vegetation around the base of guardrail | annual mowing, 4' - 6' wide pass adjacent to shoulder as necessary | hand held mower (weedeater) attenuator | none required | mid-June on as needed | seed and fertilize as needed to improve competition against weeds |

**Zone 2 Maintenance - *selective trimming***

| Location Type | Management Goal | Method | Equipment | Materials | Timing | IVM Follow-up |
|---|---|---|---|---|---|---|
| operational zone | annual brush control adjacent to shoulder to maintain sight distance and other operational needs. | annual mechanical trimming where needed. Follow up trimming with pole saw as needed. | mower with side-arm unit, pole saw, attenuator as needed. | none required | Late in season to avoid visual impacts. | seed and fertilize if alder/scotch broom are present to improve competition. |

# *Appendix A Integrated Vegetation Management Prescriptions*

## Tree and Brush Control

**Tree and Brush Control - *Alder, Maple, Cottonwood (trees under 6' ht.)***

| Location Type | Action Threshold | Management Goal | Method | Equipment | Materials | Timing | IVM Follow-up |
|---|---|---|---|---|---|---|---|
| Zone 2 outside the reach of mowers | as soon as seedlings become visible w/in 30' of fog line | control of seedling trees that may impact roadside function if allowed to grow. | foliar treatment w/ herbicide | tank sprayer with hose or backpack sprayer | Garlon 3A w/ Redi-vert at label rate. Krenite S on alder at lable rate. | late fall to avoid brown out | Fertilize if necessay to enhance native plant competition |

**Tree and Brush Control - *Alder, Maple, Cottonwood (trees under 6' ht.)***

| Location Type | Action Threshold | Management Goal | Method | Equipment | Materials | Timing | IVM Follow-up |
|---|---|---|---|---|---|---|---|
| Zone 2 outside the reach of mowers | as soon as seedlings become visible w/in 30' of fog line | control of seedling trees that may impact roadside function if allowed to grow. | hand cutting, treatment of cut surface w/ herbicide<br><br>leave cut stems on site | chain saw and/or loppers spray bottle | Garlon 4 at label rate for cut-stump treatment | anytime | Fertilize if necessay to enhance native plant competition |

**Tree and Brush Control - *Alder, Maple, Cottonwood (trees over 6' ht.)***

| Location Type | Action Threshold | Management Goal | Method | Equipment | Materials | Timing | IVM Follow-up |
|---|---|---|---|---|---|---|---|
| Zone 2 | whenever trees are likely or have potential to grow and fall on the highway | control of young trees that may impact roadside function if allowed to grow. | hand cutting, treatment of cut surface w/ herbicide<br><br>chip debris in zone 2 | power saws, loppers, chipper, backpack or hand-held sprayer | Garlon 4 at label rate for cut-stump treatment | anytime | Fertilize if necessay to enhance native plant competition |

**Tree and Brush Control - *Conifers (trees under 2' ht.)***

| Location Type | Action Threshold | Management Goal | Method | Equipment | Materials | Timing | IVM Follow-up |
|---|---|---|---|---|---|---|---|
| Zones 1 and 2 | as soon as seedlings become visible w/in 30' of fog line (no guardrail present) | control of seedling trees that may impact roadside function if allowed to grow. | foliar treatment w/ herbicide | tank sprayer where possible, backpack sprayer where necessary | Garlon 3A or Escort w/ Redi-vert at label rate. | mid summer when new growth is present | Fertilize if necessay to enhance native plant competition |

**Tree and Brush Control - *Conifers (trees under 2' ht.)***

| Location Type | Action Threshold | Management Goal | Method | Equipment | Materials | Timing | IVM Follow-up |
|---|---|---|---|---|---|---|---|
| Zone 2 | as soon as seedlings become visible w/in 30' of fog line (no guardrail present) | control of seedling trees that may impact roadside function if allowed to grow. | hand pulling | Weed Wrench optional | | anytime | Fertilize if necessay to enhance native plant competition |

**Tree and Brush Control - *Conifers (trees over 2' ht.)***

| Location Type | Action Threshold | Management Goal | Method | Equipment | Materials | Timing | IVM Follow-up |
|---|---|---|---|---|---|---|---|
| Zone 2 and 3 | whenever tree has been identified as defective or likely to fall on the highway | control of young trees that may impact roadside function if allowed to grow. | hand cutting<br><br>chip debris in zone 2 if necessary | power saws, chipper, | | anytime | Fertilize if necessay to enhance native plant competition |

# Appendix A Integrated Vegetation Management Prescriptions

## Noxious Weed Control

### Noxious Weed Control - *Meadow knapweed (A)*

| Location Type | Action Threshold | Management Goal | Method | Equipment | Materials | Timing | IVM Follow-up |
|---|---|---|---|---|---|---|---|
| all zones | as soon as plants appear | eradication and control of listed noxious weeds. | spot treatment w/ herbicide most effective | tank sprayer where possible, backpack sprayer where necessary | Transline or Garlon 3A at label rates. Rodeo as necessary adjacent to water. | growing season | Reapply as necessary. Seed and fertilize to reduce weed competition. |

### Noxious Weed Control - *Spotted knapweed (A)*

| Location Type | Action Threshold | Management Goal | Method | Equipment | Materials | Timing | IVM Follow-up |
|---|---|---|---|---|---|---|---|
| all zones | as soon as plants appear | eradication and control of listed noxious weeds. | spot treatment w/ herbicide | backpack sprayer, pickup, etc. | Transline at label rates. Rodeo as necessary adjacent to water. | growing season | Reapply as necessary. Seed and fertilize to reduce weed competition. |

### Noxious Weed Control - *Spotted and Meadow knapweed (B)*

| Location Type | Action Threshold | Management Goal | Method | Equipment | Materials | Timing | IVM Follow-up |
|---|---|---|---|---|---|---|---|
| all zones | as soon as plants appear | eradication and control of listed noxious weeds. | hand removal (roots must be removed) remove plant from site | labor, transportation | none required | when visible | Repeat as necessary. Seed and fertilize to reduce weed competition. |

# Appendix A Integrated Vegetation Management Prescriptions

## Nuisance Weed Control

### Nuisance Weed Control - *Tansy ragwort (A)*

| Location Type | Action Threshold | Management Goal | Method | Equipment | Materials | Timing | IVM Follow-up |
|---|---|---|---|---|---|---|---|
| all zones | wherever present | eradication and control of listed noxious weeds. | spot treatment w/ herbicide | tank sprayer where possible, backpack sprayer where necessary | Transline or Garlon 3A at label rates. Rodeo as necessary adjacent to water. | spray by May | Reapply as necessary. Seed and fertilize to reduce weed competition. |

### Nuisance Weed Control - *Tansy ragwort (B)*

| Location Type | Action Threshold | Management Goal | Method | Equipment | Materials | Timing | IVM Follow-up |
|---|---|---|---|---|---|---|---|
| all zones | wherever present | eradication and control of listed noxious weeds. | hand removal*<br>* may include cut stump treatment | labor, transportation | none required*<br>* Rodeo in spray bottle for cut stump treatment. | June-August prior to seed set | Repeat as necessary. Seed and fertilize to reduce weed competition. |

### Nuisance Weed Control - *Poison hemlock (A)*

| Location Type | Action Threshold | Management Goal | Method | Equipment | Materials | Timing | IVM Follow-up |
|---|---|---|---|---|---|---|---|
| all zones | wherever present | eradication and control of listed noxious weeds. | spot treatment w/ herbicide | backpack sprayer, pickup, etc. | Telar or Rodeo at label rates | spray by April | Reapply as necessary. Seed and fertilize to reduce weed competition. |

### Nuisance Weed Control - *Poison hemlock (B)*

| Location Type | Action Threshold | Management Goal | Method | Equipment | Materials | Timing | IVM Follow-up |
|---|---|---|---|---|---|---|---|
| all zones | wherever present | eradication and control of listed noxious weeds. | hand removal<br>remove plant from site | labor, transportation<br>gloves | none required | June, July prior to seed set | Repeat as necessary. Seed and fertilize to reduce weed competition. |

### Nuisance Weed Control - *Scotch broom (A)*

| Location Type | Action Threshold | Management Goal | Method | Equipment | Materials | Timing | IVM Follow-up |
|---|---|---|---|---|---|---|---|
| all zones | wherever new infestations occur (dependent on available resources) | eradication and control of selected nuisance weeds and brush. | foliar treatment w/ herbicide | tank sprayer where possible, backpack sprayer where necessary | Garlon 3A and Redi-vert at label rates | prior to seed | Reapply as necessary. Seed and fertilize or plant to restore native plant community. |

### Nuisance Weed Control - *Scotch broom (B)*

| Location Type | Action Threshold | Management Goal | Method | Equipment | Materials | Timing | IVM Follow-up |
|---|---|---|---|---|---|---|---|
| all zones | wherever present (dependent on available resources) | eradication and control of selected nuisance weeds and brush. | basal stem treatment w/ herbicide | backpack sprayer or spray bottle as necessary | Garlon 3A at label rates | fall | Reapply as necessary. Seed and fertilize or plant to restore native plant community. |

### Nuisance Weed Control - *Scotch broom ( C )*

| Location Type | Action Threshold | Management Goal | Method | Equipment | Materials | Timing | IVM Follow-up |
|---|---|---|---|---|---|---|---|
| all zones | wherever present (dependent on available resources) | eradication and control of selected nuisance weeds and brush. | mechanical control with follow-up cut stump treatment | mower, attenuator, backpack sprayer or spray bottle where necessary | Garlon 3A at label rates | after mowing | Re-cut/treat as necessary Seed and fertilize or plant to restore native plant community. |

### Nuisance Weed Control - *Himalayan blackberry (A)*

| Location Type | Action Threshold | Management Goal | Method | Equipment | Materials | Timing | IVM Follow-up |
|---|---|---|---|---|---|---|---|
| all zones | wherever present (dependent on available resources) | eradication and control of selected nuisance weeds and brush. | foliar treatment w/ herbicide | tank sprayer where possible, backpack sprayer where necessary | Garlon 3A at label rates | fall after berries drop | Reapply as necessary. Seed and fertilize or plant to restore native plant community. |

### Nuisance Weed Control - *Himalayan blackberry (B)*

| Location Type | Action Threshold | Management Goal | Method | Equipment | Materials | Timing | IVM Follow-up |
|---|---|---|---|---|---|---|---|
| all zones | wherever present (dependent on available resources) | eradication and control of selected nuisance weeds and brush. | mechanical control with follow-up cut stump treatment | mower or hand labor, backpack sprayer or spray bottle where necessary | Garlon 3A at label rates | after mowing in fall | Re-cut/treat as necessary Seed and fertilize or plant to restore native plant community. |

### Nuisance Weed Control - *Knotweed species (A)*

| Location Type | Action Threshold | Management Goal | Method | Equipment | Materials | Timing | IVM Follow-up |
|---|---|---|---|---|---|---|---|
| all zones | wherever present (dependent on available resources) | eradication and control of selected nuisance weeds and brush. | foliar treatment w/ herbicide | tank sprayer where possible, backpack sprayer where necessary | Garlon at label rates (up to 5% solution) | growing season | Reapply when necessary - may take multiple applications. Restore site w/ native vegetation. |

### Nuisance Weed Control - *Knotweed species (B)*

| Location Type | Action Threshold | Management Goal | Method | Equipment | Materials | Timing | IVM Follow-up |
|---|---|---|---|---|---|---|---|
| all zones | wherever present (dependent on available resources) | eradication and control of selected nuisance weeds and brush. | stem injection w/ herbicide<br>(extremely effective) | injection equipment | Concentrated Roundup at label rates. | Any time of year | Re-treat green stems as necessary. Restore site w/ native vegetation. |

# *Appendix A* *Integrated Vegetation Management Prescriptions*

**Nuisance Weed Control - *Canadian thistle***

| Location Type | Action Threshold | Management Goal | Method | Equipment | Materials | Timing | IVM Follow-up |
|---|---|---|---|---|---|---|---|
| all zones | wherever present (dependent on available resources) | eradication and control of selected nuisance weeds and brush. | foliar treatment w/ herbicide | tank sprayer where possible, backpack sprayer where necessary | Transline or Telar where appropriate at label rates. | When buds are forming on plants | Reapply as necessary. |

**Nuisance Weed Control - *Horsetail***

| Location Type | Action Threshold | Management Goal | Method | Equipment | Materials | Timing | IVM Follow-up |
|---|---|---|---|---|---|---|---|
| within 6 ft. of pavement edge | wherever present (dependent on available resources) | eradication and control of selected nuisance weeds | foliar treatment w/ herbicide | tank sprayer where possible, backpack sprayer where necessary | Telar @ 1.5 oz/acre | 1x during growing season | Reapply as necessary. |

Appendix B

## *Table 1.1.2*

***Zone 1 is maintained as a 3' wide strip in locations as described on this table.***

| SR | Direction | BEG MP | END MP | Site Discription |
|---|---|---|---|---|
| 305 | Decrease | 6.80 | 6.63 | Guardrail |
| 305 | Decrease | 6.05 | 6.00 | Guardrail |
| 305 | Decrease | 5.38 | 5.36 | Guardrail |
| 305 | Decrease | 5.28 | 5.23 | Guardrail |
| 305 | Decrease | 5.21 | 5.85 | Guardrail |
| 305 | Decrease | 4.67 | 4.54 | Guardrail |
| 305 | Decrease | 3.94 | 3.74 | Guardrail (abutts an herbicide sensitive area) |
| 305 | Decrease | 3.73 | 3.67 | Guardrail (abutts an herbicide sensitive area) |
| 305 | Decrease | 3.43 | 3.39 | Guardrail |
| 305 | Decrease | 3.38 | 3.12 | Guardrail |
| 305 | Decrease | 3.07 | 3.00 | Guardrail |
| 305 | Decrease | 2.90 | 2.75 | Guardrail |
| 305 | Decrease | 2.45 | 2.44 | Guardrail (abutts an herbicide sensitive area) |
| 305 | Decrease | 2.43 | 2.41 | Guardrail (abutts an herbicide sensitive area) |
| 305 | Decrease | 1.96 | 1.82 | Guardrail |
| 305 | Decrease | 1.45 | 1.31 | Guardrail |
| 305 | Decrease | 1.27 | 1.13 | Guardrail |
| 305 | Decrease | 0.52 | 0.41 | Guardrail |
| 305 | Decrease | 0.12 | 0.00 | Guardrail |
| 305 | Increase | 0.47 | 0.53 | Guardrail |
| 305 | Increase | 1.32 | 1.45 | Guardrail |
| 305 | Increase | 1.88 | 1.98 | Guardrail |
| 305 | Increase | 2.21 | 2.31 | Guardrail |
| 305 | Increase | 2.41 | 2.43 | Guardrail (abutts an herbicide sensitive area) |
| 305 | Increase | 2.44 | 2.47 | Guardrail (abutts an herbicide sensitive area) |
| 305 | Increase | 2.78 | 2.90 | Guardrail |
| 305 | Increase | 3.42 | 3.44 | Guardrail |
| 305 | Increase | 3.69 | 3.73 | Guardrail (abutts an herbicide sensitive area) |
| 305 | Increase | 3.74 | 3.85 | Guardrail (abutts an herbicide sensitive area) |
| 305 | Increase | 4.17 | 4.19 | Guardrail |
| 305 | Increase | 4.59 | 4.71 | Guardrail |
| 305 | Increase | 5.13 | 5.23 | Guardrail |
| 305 | Increase | 5.25 | 5.31 | Guardrail |
| 305 | Increase | 5.41 | 5.45 | Guardrail |
| 305 | Increase | 6.02 | 6.07 | Guardrail |
| 305 | Increase | 6.69 | 6.80 | Guardrail |

*Table 1.2.3*

***Condition Descriptions:*** *No Hardware Present(NO), Jersey Barrier(JB), Guardrail(GR)*

| SR | Direction | BEG MP | END MP | Zone 2 |
|---|---|---|---|---|
| 305 | Decrease | 6.80 | 6.63 | GR |
| 305 | Decrease | 6.63 | 6.05 | NO |
| 305 | Decrease | 6.05 | 6.00 | GR |
| 305 | Decrease | 6.00 | 5.38 | NO |
| 305 | Decrease | 5.38 | 5.36 | GR |
| 305 | Decrease | 5.36 | 5.28 | NO |
| 305 | Decrease | 5.28 | 5.23 | GR |
| 305 | Decrease | 5.23 | 5.21 | NO |
| 305 | Decrease | 5.21 | 5.85 | GR |
| 305 | Decrease | 5.85 | 4.67 | NO |
| 305 | Decrease | 4.67 | 4.54 | GR |
| 305 | Decrease | 4.54 | 3.94 | NO |
| 305 | Decrease | 3.94 | 3.67 | GR |
| 305 | Decrease | 3.67 | 3.43 | NO |
| 305 | Decrease | 3.43 | 3.39 | GR |
| 305 | Decrease | 3.39 | 3.38 | NO |
| 305 | Decrease | 3.38 | 3.12 | GR |
| 305 | Decrease | 3.12 | 3.07 | NO |
| 305 | Decrease | 3.07 | 3.00 | GR |
| 305 | Decrease | 3.00 | 2.90 | NO |
| 305 | Decrease | 2.90 | 2.75 | GR |
| 305 | Decrease | 2.75 | 2.45 | NO |
| 305 | Decrease | 2.45 | 2.41 | GR |
| 305 | Decrease | 2.41 | 1.96 | NO |
| 305 | Decrease | 1.96 | 1.82 | GR |
| 305 | Decrease | 1.82 | 1.45 | NO |
| 305 | Decrease | 1.45 | 1.31 | GR |
| 305 | Decrease | 1.31 | 1.27 | NO |
| 305 | Decrease | 1.27 | 1.13 | GR |
| 305 | Decrease | 1.13 | 0.52 | NO |
| 305 | Decrease | 0.52 | 0.41 | GR |
| 305 | Decrease | 0.41 | 0.20 | NO |
| 305 | Decrease | 0.20 | 0.12 | CURB |
| 305 | Decrease | 0.12 | 0.00 | GR |
| 305 | Increase | 0.00 | 0.23 | CURB |
| 305 | Increase | 0.23 | 0.47 | NO |
| 305 | Increase | 0.47 | 0.53 | GR |
| 305 | Increase | 0.53 | 1.32 | NO |
| 305 | Increase | 1.32 | 1.45 | GR |
| 305 | Increase | 1.45 | 1.88 | NO |
| 305 | Increase | 1.88 | 1.98 | GR |
| 305 | Increase | 1.98 | 2.21 | NO |
| 305 | Increase | 2.21 | 2.31 | GR |
| 305 | Increase | 2.31 | 2.41 | NO |
| 305 | Increase | 2.41 | 2.47 | GR |
| 305 | Increase | 2.47 | 2.78 | NO |

*Table 1.2.3*

***Condition Descriptions:*** *No Hardware Present(NO), Jersey Barrier(JB), Guardrail(GR)*

| SR | Direction | BEG MP | END MP | Zone 2 |
|---|---|---|---|---|
| 305 | Increase | 2.78 | 2.90 | GR |
| 305 | Increase | 2.90 | 3.42 | NO |
| 305 | Increase | 3.42 | 3.44 | GR |
| 305 | Increase | 3.44 | 3.69 | NO |
| 305 | Increase | 3.69 | 3.85 | GR |
| 305 | Increase | 3.85 | 4.17 | NO |
| 305 | Increase | 4.17 | 4.19 | GR |
| 305 | Increase | 4.19 | 4.59 | NO |
| 305 | Increase | 4.59 | 4.71 | GR |
| 305 | Increase | 4.71 | 5.13 | NO |
| 305 | Increase | 5.13 | 5.23 | GR |
| 305 | Increase | 5.23 | 5.25 | NO |
| 305 | Increase | 5.25 | 5.31 | GR |
| 305 | Increase | 5.31 | 5.41 | NO |
| 305 | Increase | 5.41 | 5.45 | GR |
| 305 | Increase | 5.45 | 6.02 | NO |
| 305 | Increase | 6.02 | 6.07 | GR |
| 305 | Increase | 6.07 | 6.69 | NO |
| 305 | Increase | 6.69 | 6.80 | GR |

***Table 2.3.4***

***Weed Species*** *- noxious weed species required for control in Kitsap County*
***Level of Infestation*** *- minor infestation, few individual plants (Low), major infestation, many plants (High)*

| SR | Direction | Weed Species | BEG MP | END MP | Level of Infestation |
|---|---|---|---|---|---|
| 305 | Increase | Diffuse Knapweed | 1.23 | 1.23 | Low |
| 305 | Increase | Meadow Knapweed | 1.76 | 1.76 | Low |

### *Table 2.3.4*

***Weed Species*** *- All species except Himalayan Blackberry are state classified B and C noxious weeds, the term nuisance weeds is used to describe them here because they are not designated for required control in Kitsap County at this time.*
***Level of Infestation*** *- minor infestation, few individual plants (Low), major infestation, many plants (High)*

| SR | Direction | Weed Species | BEG MP | END MP | Level of Infestation |
|---|---|---|---|---|---|
| 305 | Increase | Himalayan Blackberry | 0.30 | 0.43 | High |
| 305 | Increase | Himalayan Blackberry | 0.43 | 0.47 | Low |
| 305 | Increase | Himalayan Blackberry | 0.63 | 0.70 | High |
| 305 | Increase | Himalayan Blackberry | 0.70 | 0.95 | Low |
| 305 | Increase | Himalayan Blackberry | 0.97 | 1.10 | Low |
| 305 | Increase | Himalayan Blackberry | 1.10 | 1.13 | High |
| 305 | Increase | Himalayan Blackberry | 1.13 | 1.27 | Low |
| 305 | Increase | Himalayan Blackberry | 1.27 | 1.31 | High |
| 305 | Increase | Himalayan Blackberry | 1.31 | 1.47 | Low |
| 305 | Increase | Himalayan Blackberry | 1.47 | 1.51 | High |
| 305 | Increase | Himalayan Blackberry | 1.66 | 2.90 | High |
| 305 | Increase | Himalayan Blackberry | 2.97 | 3.38 | Low |
| 305 | Increase | Himalayan Blackberry | 3.45 | 4.15 | Low |
| 305 | Increase | Himalayan Blackberry | 4.28 | 4.48 | Low |
| 305 | Increase | Himalayan Blackberry | 4.51 | 4.77 | Low |
| 305 | Increase | Himalayan Blackberry | 4.77 | 4.86 | High |
| 305 | Increase | Himalayan Blackberry | 4.86 | 4.91 | Low |
| 305 | Increase | Himalayan Blackberry | 5.14 | 5.60 | Low |
| 305 | Increase | Himalayan Blackberry | 5.60 | 5.73 | High |
| 305 | Increase | Himalayan Blackberry | 5.73 | 5.94 | Low |
| 305 | Increase | Himalayan Blackberry | 6.05 | 6.10 | Low |
| 305 | Increase | Himalayan Blackberry | 6.32 | 6.83 | Low |
| 305 | Decrease | Himalayan Blackberry | 6.58 | 6.43 | Low |
| 305 | Decrease | Himalayan Blackberry | 6.36 | 6.36 | Low |
| 305 | Decrease | Himalayan Blackberry | 5.98 | 5.90 | Low |
| 305 | Decrease | Himalayan Blackberry | 5.90 | 5.86 | High |
| 305 | Decrease | Himalayan Blackberry | 5.86 | 5.77 | Low |
| 305 | Decrease | Himalayan Blackberry | 4.88 | 4.40 | Low |
| 305 | Decrease | Himalayan Blackberry | 4.40 | 4.35 | High |
| 305 | Decrease | Himalayan Blackberry | 4.35 | 4.25 | Low |
| 305 | Decrease | Himalayan Blackberry | 4.07 | 3.88 | Low |
| 305 | Decrease | Himalayan Blackberry | 3.85 | 3.63 | Low |
| 305 | Decrease | Himalayan Blackberry | 3.50 | 3.40 | Low |
| 305 | Decrease | Himalayan Blackberry | 3.28 | 1.60 | Low |
| 305 | Decrease | Himalayan Blackberry | 1.49 | 1.36 | Low |
| 305 | Decrease | Himalayan Blackberry | 1.34 | 0.77 | Low |
| 305 | Decrease | Himalayan Blackberry | 0.98 | 0.77 | High |
| 305 | Decrease | Himalayan Blackberry | 0.72 | 0.24 | Low |
| 305 | Increase | Bull Thistle | 1.29 | 1.29 | Low |
| 305 | Increase | Bull Thistle | 1.97 | 1.97 | Low |
| 305 | Increase | Bull Thistle | 2.48 | 2.48 | Low |
| 305 | Increase | Bull Thistle | 2.69 | 2.69 | Low |

***Table 2.3.4***

***Weed Species*** *- All species except Himalayan Blackberry are state classified B and C noxious weeds, the term nuisance weeds is used to describe them here because they are not designated for required control in Kitsap County at this time.*
***Level of Infestation*** *- minor infestation, few individual plants (Low), major infestation, many plants (High)*

| SR | Direction | Weed Species | BEG MP | END MP | Level of Infestation |
|---|---|---|---|---|---|
| 305 | Increase | Bull Thistle | 2.94 | 3.00 | Low |
| 305 | Increase | Bull Thistle | 3.02 | 3.02 | Low |
| 305 | Increase | Bull Thistle | 3.09 | 3.21 | Low |
| 305 | Increase | Bull Thistle | 3.28 | 3.28 | Low |
| 305 | Increase | Bull Thistle | 3.40 | 3.62 | Low |
| 305 | Increase | Bull Thistle | 4.07 | 4.07 | Low |
| 305 | Increase | Bull Thistle | 6.40 | 6.68 | Low |
| 305 | Decrease | Bull Thistle | 6.56 | 6.56 | Low |
| 305 | Decrease | Bull Thistle | 5.50 | 5.50 | Low |
| 305 | Decrease | Bull Thistle | 4.88 | 4.88 | Low |
| 305 | Decrease | Bull Thistle | 4.75 | 4.75 | Low |
| 305 | Decrease | Bull Thistle | 4.15 | 4.15 | Low |
| 305 | Decrease | Bull Thistle | 3.99 | 3.99 | Low |
| 305 | Decrease | Bull Thistle | 3.65 | 3.65 | Low |
| 305 | Decrease | Bull Thistle | 3.35 | 3.35 | Low |
| 305 | Decrease | Bull Thistle | 2.70 | 2.70 | Low |
| 305 | Decrease | Bull Thistle | 2.46 | 2.46 | Low |
| 305 | Decrease | Bull Thistle | 2.43 | 2.43 | Low |
| 305 | Decrease | Bull Thistle | 2.34 | 2.34 | Low |
| 305 | Decrease | Bull Thistle | 2.02 | 2.02 | Low |
| 305 | Decrease | Bull Thistle | 0.69 | 0.69 | Low |
| 305 | Increase | Butterfly Bush | 5.92 | 5.92 | Low |
| 305 | Decrease | Butterfly Bush | 0.79 | 0.79 | Low |
| 305 | Decrease | Butterfly Bush | 0.29 | 0.27 | Low |
| 305 | Increase | Canada Thistle | 1.25 | 1.26 | Low |
| 305 | Increase | Canada Thistle | 2.63 | 2.63 | Low |
| 305 | Increase | Canada Thistle | 2.99 | 3.08 | Low |
| 305 | Increase | Canada Thistle | 3.44 | 3.44 | Low |
| 305 | Increase | Canada Thistle | 3.53 | 3.53 | Low |
| 305 | Increase | Canada Thistle | 3.58 | 3.62 | Low |
| 305 | Increase | Canada Thistle | 6.40 | 6.68 | Low |
| 305 | Decrease | Canada Thistle | 6.58 | 6.58 | Low |
| 305 | Decrease | Canada Thistle | 5.21 | 5.21 | Low |
| 305 | Increase | Common Tansy | 4.01 | 4.01 | Low |
| 305 | Increase | Common Tansy | 4.51 | 4.52 | Low |
| 305 | Increase | Common Tansy | 4.94 | 4.99 | Low |
| 305 | Increase | Common Tansy | 5.07 | 5.07 | Low |
| 305 | Increase | Common Tansy | 5.44 | 5.44 | Low |

### *Table 2.3.4*

***Weed Species*** *- All species except Himalayan Blackberry are state classified B and C noxious weeds, the term nuisance weeds is used to describe them here because they are not designated for required control in Kitsap County at this time.*
***Level of Infestation*** *- minor infestation, few individual plants (Low), major infestation, many plants (High)*

| SR | Direction | Weed Species | BEG MP | END MP | Level of Infestation |
|---|---|---|---|---|---|
| 305 | Increase | Common Tansy | 5.62 | 5.62 | Low |
| 305 | Increase | Common Tansy | 5.78 | 5.78 | Low |
| 305 | Increase | Common Tansy | 5.89 | 5.89 | Low |
| 305 | Increase | Common Tansy | 6.46 | 6.46 | Low |
| 305 | Decrease | Common Tansy | 5.87 | 5.87 | Low |
| 305 | Decrease | Common Tansy | 5.01 | 5.01 | Low |
| 305 | Decrease | Common Tansy | 1.06 | 1.06 | Low |
| 305 | Increase | Musk Thistle | 1.74 | 1.77 | Low |
| 305 | Increase | Musk Thistle | 6.40 | 6.68 | Low |
| 305 | Decrease | Musk Thistle | 6.58 | 6.58 | Low |
| 305 | Decrease | Musk Thistle | 6.53 | 6.53 | Low |
| 305 | Increase | Poison Hemlock | 0.35 | 0.42 | Low |
| 305 | Increase | Poison Hemlock | 0.69 | 1.17 | Low |
| 305 | Increase | Poison Hemlock | 1.33 | 1.33 | Low |
| 305 | Increase | Poison Hemlock | 1.78 | 1.83 | Low |
| 305 | Increase | Poison Hemlock | 1.93 | 1.93 | Low |
| 305 | Increase | Poison Hemlock | 2.36 | 2.36 | Low |
| 305 | Increase | Poison Hemlock | 2.61 | 2.61 | Low |
| 305 | Increase | Poison Hemlock | 2.70 | 2.70 | Low |
| 305 | Increase | Poison Hemlock | 2.81 | 2.81 | Low |
| 305 | Increase | Poison Hemlock | 3.09 | 3.09 | Low |
| 305 | Increase | Poison Hemlock | 3.18 | 3.18 | Low |
| 305 | Increase | Poison Hemlock | 3.69 | 3.69 | Low |
| 305 | Increase | Poison Hemlock | 4.72 | 4.72 | Low |
| 305 | Increase | Poison Hemlock | 4.76 | 4.79 | Low |
| 305 | Increase | Poison Hemlock | 4.92 | 4.92 | Low |
| 305 | Increase | Poison Hemlock | 5.25 | 5.25 | Low |
| 305 | Decrease | Poison Hemlock | 0.29 | 0.25 | Low |
| 305 | Decrease | Poison Hemlock | 0.69 | 0.61 | Low |
| 305 | Decrease | Poison Hemlock | 0.90 | 0.80 | Low |
| 305 | Decrease | Poison Hemlock | 1.26 | 1.26 | Low |
| 305 | Decrease | Poison Hemlock | 1.81 | 1.81 | Low |
| 305 | Decrease | Poison Hemlock | 6.73 | 6.71 | Low |
| 305 | Increase | Scotch broom | 0.38 | 0.77 | Low |
| 305 | Increase | Scotch broom | 0.99 | 1.07 | Low |
| 305 | Increase | Scotch broom | 1.23 | 1.27 | Low |
| 305 | Increase | Scotch broom | 1.41 | 2.16 | Low |

*Table 2.3.4*

***Weed Species*** *- All species except Himalayan Blackberry are state classified B and C noxious weeds, the term nuisance weeds is used to describe them here because they are not designated for required control in Kitsap County at this time.*
***Level of Infestation*** *- minor infestation, few individual plants (Low), major infestation, many plants (High)*

| SR | Direction | Weed Species | BEG MP | END MP | Level of Infestation |
|---|---|---|---|---|---|
| 305 | Increase | Scotch broom | 2.16 | 2.21 | High |
| 305 | Increase | Scotch broom | 2.21 | 2.34 | Low |
| 305 | Increase | Scotch broom | 2.34 | 2.60 | High |
| 305 | Increase | Scotch broom | 2.60 | 2.90 | Low |
| 305 | Increase | Scotch broom | 3.08 | 3.38 | Low |
| 305 | Increase | Scotch broom | 3.62 | 3.67 | High |
| 305 | Increase | Scotch broom | 4.73 | 4.77 | Low |
| 305 | Increase | Scotch broom | 4.91 | 5.40 | Low |
| 305 | Increase | Scotch broom | 5.81 | 5.85 | Low |
| 305 | Increase | Scotch broom | 5.94 | 6.12 | Low |
| 305 | Increase | Scotch broom | 6.12 | 6.32 | High |
| 305 | Increase | Scotch broom | 6.32 | 6.55 | Low |
| 305 | Increase | Scotch broom | 6.73 | 6.83 | Low |
| 305 | Decrease | Scotch broom | 6.81 | 6.58 | Low |
| 305 | Decrease | Scotch broom | 6.40 | 5.90 | Low |
| 305 | Decrease | Scotch broom | 6.03 | 6.00 | High |
| 305 | Decrease | Scotch broom | 5.21 | 5.09 | Low |
| 305 | Decrease | Scotch broom | 4.95 | 4.95 | Low |
| 305 | Decrease | Scotch broom | 4.71 | 4.68 | Low |
| 305 | Decrease | Scotch broom | 4.55 | 3.55 | Low |
| 305 | Decrease | Scotch broom | 3.24 | 3.08 | Low |
| 305 | Decrease | Scotch broom | 2.99 | 2.17 | Low |
| 305 | Decrease | Scotch broom | 1.97 | 1.90 | Low |
| 305 | Decrease | Scotch broom | 1.65 | 1.60 | Low |
| 305 | Decrease | Scotch broom | 1.54 | 1.42 | Low |
| 305 | Decrease | Scotch broom | 1.34 | 1.32 | Low |
| 305 | Decrease | Scotch broom | 1.05 | 0.72 | Low |
| 305 | Decrease | Scotch broom | 0.48 | 0.35 | Low |
| 305 | Decrease | Scotch broom | 0.30 | 0.24 | Low |
| 305 | Increase | Tansy Ragwort | 0.80 | 0.80 | Low |
| 305 | Increase | Tansy Ragwort | 0.93 | 0.96 | Low |
| 305 | Increase | Tansy Ragwort | 1.19 | 1.33 | Low |
| 305 | Increase | Tansy Ragwort | 1.50 | 1.62 | Low |
| 305 | Increase | Tansy Ragwort | 1.76 | 1.76 | Low |
| 305 | Increase | Tansy Ragwort | 2.08 | 2.12 | Low |
| 305 | Increase | Tansy Ragwort | 2.20 | 2.20 | Low |
| 305 | Increase | Tansy Ragwort | 2.37 | 2.41 | Low |
| 305 | Increase | Tansy Ragwort | 2.47 | 2.54 | Low |
| 305 | Increase | Tansy Ragwort | 2.64 | 2.64 | Low |
| 305 | Increase | Tansy Ragwort | 2.68 | 2.70 | Low |
| 305 | Increase | Tansy Ragwort | 2.91 | 2.97 | Low |
| 305 | Increase | Tansy Ragwort | 3.02 | 3.18 | Low |

### *Table 2.3.4*

***Weed Species*** *- All species except Himalayan Blackberry are state classified B and C noxious weeds, the term nuisance weeds is used to describe them here because they are not designated for required control in Kitsap County at this time.*
***Level of Infestation*** *- minor infestation, few individual plants (Low), major infestation, many plants (High)*

| SR | Direction | Weed Species | BEG MP | END MP | Level of Infestation |
|---|---|---|---|---|---|
| 305 | Increase | Tansy Ragwort | 3.34 | 3.34 | Low |
| 305 | Increase | Tansy Ragwort | 4.09 | 4.09 | Low |
| 305 | Increase | Tansy Ragwort | 4.42 | 4.45 | Low |
| 305 | Increase | Tansy Ragwort | 5.65 | 5.65 | Low |
| 305 | Increase | Tansy Ragwort | 6.39 | 6.52 | Low |
| 305 | Decrease | Tansy Ragwort | 0.25 | 0.25 | Low |
| 305 | Decrease | Tansy Ragwort | 0.36 | 0.33 | Low |
| 305 | Decrease | Tansy Ragwort | 0.69 | 0.69 | Low |
| 305 | Decrease | Tansy Ragwort | 0.86 | 0.80 | Low |
| 305 | Decrease | Tansy Ragwort | 1.12 | 1.12 | Low |
| 305 | Decrease | Tansy Ragwort | 1.79 | 1.73 | Low |
| 305 | Decrease | Tansy Ragwort | 2.15 | 2.15 | Low |
| 305 | Decrease | Tansy Ragwort | 2.66 | 2.34 | Low |
| 305 | Decrease | Tansy Ragwort | 3.68 | 3.67 | Low |
| 305 | Decrease | Tansy Ragwort | 4.00 | 3.96 | Low |
| 305 | Decrease | Tansy Ragwort | 4.15 | 4.15 | Low |
| 305 | Decrease | Tansy Ragwort | 4.52 | 4.43 | Low |
| 305 | Decrease | Tansy Ragwort | 4.70 | 4.70 | Low |
| 305 | Decrease | Tansy Ragwort | 4.80 | 4.80 | Low |
| 305 | Decrease | Tansy Ragwort | 4.99 | 4.87 | Low |
| 305 | Decrease | Tansy Ragwort | 5.25 | 5.25 | Low |
| 305 | Decrease | Tansy Ragwort | 5.34 | 5.34 | Low |
| 305 | Decrease | Tansy Ragwort | 5.53 | 5.53 | Low |

Appendix D

*Table 3.0*

| SR | Direction | BEG MP | END MP | Description |
|---|---|---|---|---|
| 305 | Both | 0.43 | 0.50 | Environmentally Sensitive Area (Priority 1) |
| 305 | Both | 0.73 | 0.79 | Environmentally Sensitive Area (Priority 1) |
| 305 | Both | 1.04 | 1.36 | Environmentally Sensitive Area (Priority 1) |
| 305 | Both | 2.43 | 2.46 | Environmentally Sensitive Area (Priority 1) |
| 305 | Both | 3.69 | 3.72 | Environmentally Sensitive Area (Priority 2) |
| 305 | Both | 6.84 | 7.04 | Environmentally Sensitive Area (Priority 1) |
| 305 | Both | 0.82 | 0.83 | X-Culvert 60' buffer zone |
| 305 | Both | 2.43 | 2.44 | Unnamed Creek 60' buffer zone |
| 305 | Both | 3.73 | 3.74 | X-Culvert 60' buffer zone |

Appendix E

Washington State Department of Transportation

# Integrated Vegetation Management Record

| Org. Code | County | Date | | Vegetation Management Zone(s) ☐ Zone 1 ☐ Zone 2 ☐ Zone 3 |
|---|---|---|---|---|

Area
SR _____ MP _____ to MP _____ Location _____

Check Appropriate Boxes
☐ NB ☐ EB ☐ SB ☐ WB
☐ Roadside ☐ Shoulder ☐ Median ☐ Landscaped Area ☐ Rest Area ☐ Park-n-Ride ☐ Interchange ☐ Bridge ☐ Ramp ☐ Mitigation Site ☐ Stormwater ☐ Yard/Stockpile

Third Party Damage ☐ Yes

Sensitive Sites ☐ Aquatic ☐ Wetlands

Target Species ☐ Noxious Weeds ☐ Brush/Trees ☐ Other ☐ Nuisance Weeds ☐ Hazard Tree

List Target: Species _____

Reason for Action:
☐ Noxious Weeds ☐ Nuisance Weeds ☐ Fire prevention ☐ Aesthetics
☐ Site Distance ☐ Hazard Vegetation ☐ Customer request ☐ Other _____

Long term IVM plan (Describe goals/objectives and a step-by-step approach over time)

Approximate Acres to Accomplish

## Activities

Planned date of Treatment Actual date of Treatment

Manual ☐ Digging ☐ Pulling ☐ Lopping ☐ Scalping ☐ Other _____

Mechanical ☐ Arial Saw Work ☐ Tractor Brush Cutter ☐ Manual Brush Cutting ☐ Tractor Mower ☐ Other _____

Bio-Control ☐ Insects ☐ pathogens ☐ Parasites Type/Species _____

Cultural ☐ Burning ☐ Grading ☐ Seeding ☐ Fertilizing ☐ Grazing ☐ Other _____

Chemical Record Number

Evaluation of Previous Treatments